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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,934	12/03/2001	Staffan Johansson	2380-569	4287

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EXAMINER

D AGOSTA, STEPHEN M

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 08/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/998,934

Applicant(s)

JOHANSSON ET AL.

Examiner

Stephen M. D'Agosta

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4.5</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

The claim to benefit for provisionals 60/250,475 and 60/250,474 is granted.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 7-11-02 and 11-26-03 are in compliance and accordingly, the information disclosure statements are being considered by the examiner.

Drawings

The drawings were received on 12-3-01. These drawings are have been reviewed by the draftsman and examiner.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The word "invention" should be removed from the Abstract.

Claim Objections

1. **Claims 1 and 6** objected to because of the following informalities: These claims recite "use claims" which do not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced. Appropriate correction is required. Failure to correct will lead to USC 112 and USC 101 (because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim) rejections.

For the purposes of examination, the examiner interprets these claims as reciting a system that operates in a CDMA network.

2. **Claims 12 and 19** objected to because of the following informalities: The phrase "using by calculating" should delete the word "using".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-12 and 17-23 rejected under 35 U.S.C. 102(e) as being anticipated by Soliman US 6,542,743 (hereafter Soliman).

As per **claim 1**, Soliman teaches a system used in a CDMA network (C1, L40-45) having a source BTS and a destination BTS where a specified mobile establishes a connection with the source BTS (figure 2b shows a cell phone user #236 moving from BTS 1 #228 to BTS 3, #232 and C10, L5-29), the method comprising:

Art Unit: 2683

Initiating a handover of the connection involving the specified mobile to the destination BTS (C1, L54 to C2, L10 teaches handoffs which inherently comprises a first/source and second/destination BTS and/or C9, L43 to C10, L29), and

Establishing a start position of a synchronization search window for the specified mobile with reference to a perceived geographical location of the mobile (C5, L39 to C6, L17 teaches setting a search window size/time based upon the user's location).

As per **claim 2**, Soliman teaches claim 1 wherein the perceived location is a geographical coordinate position of the mobile station (figure 2a shows use of GPS satellites to determine coordinate position and other procedures are available as well, see C4, L52 to C5, L36).

As per **claim 3**, Soliman teaches claim 1 wherein the step of establishing the start position involves a distance from the BTS to the perceived location of the mobile (C8, L45-47 and C4, L32-34).

As per **claim 4**, Soliman teaches claim 1 further comprising determining the perceived location of the mobile station at a RNC node of a CDMA system (figure 2b shows a cellular/CDMA network and BTS's, BSC (eg. RNC) and MSC components).

As per **claim 5**, Soliman teaches claim 4 further comprising communicating the start time position from the RNC to the destination BTS (figure 2b shows the BSC/RNC having full-duplex communications with BTS's #228 and #232. A handoff inherently requires communication among the BSC/RNC and the two BTS's involved. Hence Soliman's system would communicate the start time position from the BSC/RNC to the destination BTS to ensure that the handoff seamlessly occurs).

As per **claim 6**, Soliman teaches a system used in a CDMA network (C1, L40-45) having a source BTS and a destination BTS where a specified mobile establishes a connection with the source BTS (figure 2b shows a cell phone user #236 moving from BTS 1 #228 to BTS 3, #232 and C10, L5-29), the method comprising:

Initiating a handover of the connection involving the specified mobile to the destination BTS (C1, L54 to C2, L10 teaches handoffs which inherently comprises a first/source and second/destination BTS and/or C9, L43 to C10, L29), and

Establishing a start position of a synchronization search window for the specified mobile with reference to a calculated distance of the mobile from the destination BTS (C5, L39 to C6, L17 teaches setting a search window size/time based upon the user's location while C8, L45-47 and C4, L32-34 teach determination/calculation of the mobile's distance from any/all BTS's supporting said mobile).

As per **claim 7**, Soliman teaches claim 6 wherein the step of establishing the start position includes calculating a distance from a geographical coordinate position of the mobile to a geographical coordinate position of the destination BTS (C5, L39 to C6, L17 teaches setting a search window size/time based upon the user's location while C8,

Art Unit: 2683

L45-47 and C4, L32-34 teach determination/calculation of the mobile's distance from any/all BTS's supporting said mobile. Furthermore, figure 2a shows use of GPS satellites to determine coordinates of network components whereby distance can be calculated and C4, L52 to C5, L36 teaches Locating Methods).

As per **claim 8**, Soliman teaches claim 6 further comprises calculating the distance of the mobile from the destination BTS at a RNC node of a CDMA system (figure 2b shows a cellular/CDMA network and BTS's, BSC (eg. RNC) and MSC components, figure 2a shows use of GPS to determine positions of any/all cellular network components while C8, L45-47 and C4, L32-34 teach determination/calculation of the mobile's distance from any/all BTS's supporting said mobile).

As per **claim 9**, Soliman teaches claim 8 further comprising communicating the start time position from the RNC to the destination BTS (figure 2b shows the BSC/RNC having full-duplex communications with BTS's #228 and #232. A handoff inherently requires communication among the BSC/RNC and the two BTS's involved. Hence Soliman's system would communicate the start time position from the BSC/RNC to the destination BTS to ensure that the handoff seamlessly occurs).

As per **claim 10**, Soliman teaches a telecommunications system (figure 2b) comprising:

A source BTS and A destination BTS (figure 2b, #228 and #232),

A synchronization start position determination unit which establishes a start position of a synchronization search window for the synchronization searcher of the destination station (C5, L39 to C6, L16 teaches determination of search window),

the synchronization search window being used to detect a transmission of a specified mobile received at the destination BTS during a handover of a connection involving the specified mobile from the source BTS to the destination BTS (figure 2b shows a soft/hard handover of the mobile's "transmission" from one BTS to another whereby the need for handover would trigger use of the search window operation),

the synchronization start position determination unit establishes the start position of the synchronization search window with reference to a perceived location of the mobile (C5, L39-47 teaches location of the mobile unit to determine search window).

As per **claim 11**, Soliman teaches claim 10 wherein the perceived location is a geographical coordinate position of the mobile station (figure 2a shows use of GPS satellites to determine coordinate position and other procedures are available as well, see C4, L52 to C5, L36).

As per **claim 12**, Soliman teaches claim 10 wherein the synchronization start position determination unit establishes the start position by calculating a distance from the BTS to the perceived location of the mobile (C8, L45-47 and C4, L32-34).

Art Unit: 2683

As per **claim 17**, Soliman teaches a synchronization start position determination unit situated at a node of a CDMA network (abstract teaches both method and apparatus to determine location of mobile for use in reducing search window sizes that the examiner interprets as being located anywhere in the cellular/CDMA network shown in figure 2b) comprising:

The synchronization start position determination unit serving to establish a start position of a synchronization search window for a synchronization searcher of a destination BTS (C5, L39 to C6, L16 teaches determination of search window),,

The synchronization search window being used to detect a transmission of a specified mobile received at the destination BTS during a handover of a connection involving the specified mobile from a source BTS to the destination BTS (figure 2b shows a soft/hard handover of the mobile's "transmission" from one BTS to another whereby the need for handover would trigger use of the search window operation),,

The synchronization start position determination unit establishing the start position of the synchronization search window with reference to a perceived location of the mobile (C5, L39-47 teaches location of the mobile unit to determine search window).

As per **claim 18**, Soliman teaches claim 17 wherein the perceived location is a geographical coordinate position of the mobile station (figure 2a shows use of GPS satellites to determine coordinate position and other procedures are available as well, see C4, L52 to C5, L36).

As per **claim 19**, Soliman teaches claim 17 wherein the synchronization start position determination unit establishes the start position by calculating a distance from the BTS to the perceived location of the mobile (C8, L45-47 and C4, L32-34).

As per **claim 20**, Soliman teaches a synchronization start position determination unit situated at a node of a CDMA network (abstract teaches both method and apparatus to determine location of mobile for use in reducing search window sizes that the examiner interprets as being located anywhere in the cellular/CDMA network shown in figure 2b) comprising:

The synchronization start position determination unit serving to establish a start position of a synchronization search window for a synchronization searcher of a destination BTS (C5, L39 to C6, L16 teaches determination of search window),,

The synchronization search window being used to detect a transmission of a specified mobile received at the destination BTS during a handover of a connection involving the specified mobile from a source BTS to the destination BTS (figure 2b shows a soft/hard handover of the mobile's "transmission" from one BTS to another whereby the need for handover would trigger use of the search window operation),,

The synchronization start position determination unit establishing the start position of the synchronization search window with reference to a calculated distance of the mobile from the destination BTS (C5, L39 to C6, L17 teaches setting a search window size/time based upon the user's location while C8, L45-47 and C4, L32-34

Art Unit: 2683

teach determination/calculation of the mobile's distance from any/all BTS's supporting said mobile).

As per **claim 21**, Soliman teaches claim 20 wherein the unit establishes the start position includes calculating a distance from a geographical coordinate position of the mobile to a geographical coordinate position of the destination BTS (C5, L39 to C6, L17 teaches setting a search window size/time based upon the user's location while C8, L45-47 and C4, L32-34 teach determination/calculation of the mobile's distance from any/all BTS's supporting said mobile. Furthermore, figure 2a shows use of GPS satellites to determine coordinates of network components whereby distance can be calculated and C4, L52 to C5, L36 teaches Locating Methods).

As per **claim 22**, Soliman teaches claim 20 wherein the unit calculates the distance of the mobile from the destination BTS at a RNC node of a CDMA system (figure 2b shows a cellular/CDMA network and BTS's, BSC (eg. RNC) and MSC components, figure 2a shows use of GPS to determine positions of any/all cellular network components while C8, L45-47 and C4, L32-34 teach determination/calculation of the mobile's distance from any/all BTS's supporting said mobile).

As per **claim 23**, Soliman teaches claim 22 further comprising communicating the start time position from the RNC to the destination BTS (figure 2b shows the BSC/RNC having full-duplex communications with BTS's #228 and #232. A handoff inherently requires communication among the BSC/RNC and the two BTS's involved. Hence Soliman's system would communicate the start time position from the BSC/RNC to the destination BTS to ensure that the handoff seamlessly occurs).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Soliman.

As per **claim 13**, Soliman teaches a telecommunications system (figure 2b) comprising:

A source BTS and A destination BTS (figure 2b, #228 and #232),

Art Unit: 2683

A synchronization start position determination unit which establishes a start position of a synchronization search window for the synchronization searcher of the destination station (C5, L39 to C6, L16 teaches determination of search window),

the synchronization search window being used to detect a transmission of a specified mobile received at the destination BTS during a handover of a connection involving the specified mobile from the source BTS to the destination BTS (figure 2b shows a soft/hard handover of the mobile's "transmission" from one BTS to another whereby the need for handover would trigger use of the search window operation),

the synchronization start position determination unit establishes the start position of the synchronization search window with reference to a calculated distance of the mobile from the destination BTS (C5, L39 to C6, L17 teaches setting a search window size/time based upon the user's location while C8, L45-47 and C4, L32-34 teach determination/calculation of the mobile's distance from any/all BTS's supporting said mobile).

But is silent on a synchronization searcher at the destination BTS.

The examiner notes that Soliman teaches synchronization searcher "functionality" that can be located at one or more cellular components, eg. place at all BTS's for distributed design OR place at only the BSC for centralized design. Hence, the examiner interprets Soliman's design/functionality as being a centralized or distributed design, which one skilled in the art would place at all BTS's and hence reads on a destination BTS having a synchronization searcher.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Soliman, such that the destination BTS has a synchronization searcher, to provide means for a distributed design (instead of only supporting a centralized, single-point-of-failure design).

As per **claim 14**, Soliman teaches claim 13 wherein the synchronization start position determination unit establishes the start position by calculating a distance from a geographical coordinate position of the mobile to a geographical coordinate position of the destination BTS (C5, L39 to C6, L17 teaches setting a search window size/time based upon the user's location while C8, L45-47 and C4, L32-34 teach determination/calculation of the mobile's distance from any/all BTS's supporting said mobile. Furthermore, figure 2a shows use of GPS satellites to determine coordinates of network components whereby distance can be calculated and C4, L52 to C5, L36 teaches Locating Methods).

As per **claim 15**, Soliman teaches claim 14 wherein the synchronization start position determination unit calculates the distance of the mobile from the destination BTS at a RNC node of a CDMA system (figure 2b shows a cellular/CDMA network and BTS's, BSC (eg. RNC) and MSC components, figure 2a shows use of GPS to determine positions of any/all cellular network components while C8, L45-47 and C4, L32-34 teach determination/calculation of the mobile's distance from any/all BTS's supporting said mobile).

Art Unit: 2683

As per **claim 16**, Soliman teaches claim 15 further comprising wherein the RNC communicates the start time position to the destination BTS (figure 2b shows the BSC/RNC having full-duplex communications with BTS's #228 and #232. A handoff inherently requires communication among the BSC/RNC and the two BTS's involved. Hence Soliman's system would communicate the start time position from the BSC/RNC to the destination BTS to ensure that the handoff seamlessly occurs).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

1. Jou US 6,466,606
2. Byun US 6,445,728
3. Sutton US 5,805,648

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 703-306-5426. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stephen D'Agosta

